U.S. Serial No.: 10/551,603

Title: "Methods for Neural Differentiation of Embryonic Stem Cells Using Protease Passaging Technique"

Filed: September 30, 2005

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. Please add the words shown by underline and delete the words shown by strikethrough.

- 1. (Currently amended) A human <u>aneuploid</u> <u>pluripotent</u> embryonic stem cell culture, wherein the cells of the culture do not express SSEA1, express SSEA3, SSEA4, Oct4, Tra-1-60, Tra-1-80, and express nestin substantially uniformly.
- 2. (Original) The cell culture of Claim 1, wherein the cell culture was dissociated to an essentially single cell culture.
- 3. (Canceled)
- 4. (Currently amended) The cell culture of Claim 1 3, wherein a majority of the cells have an abnormal karyotype that comprises a trisomy of at least one autosomal chromosome.
- 5. (Original) The cell culture of Claim 4, wherein the autosomal chromosome is selected from the group consisting of chromosomes 1, 7, 8, 12, 14, and 17.
- 6. (Original) The cell culture of Claim 5, wherein the autosomal chromosome is chromosome 12 or 17.
- 7. (Currently amended) The cell culture of Claim 1 3, wherein a majority of the cells have an abnormal karyotype that comprises a trisomy of more than one autosomal chromosome.
- 8. (Original) The cell culture of Claim 7, wherein the autosomal chromosome is selected from the group consisting of chromosomes 1, 7, 8, 12, 14, and 17.
- 9. (Original) The cell culture of Claim 8, wherein the autosomal chromosome is chromosome 12 or 17.

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10. (Withdrawn, Currently amended) A method of culturing a human <u>aneuploid</u> pluripotent embryonic stem cell comprising,

- a) selecting a human pluripotent cell using an anti-SSEA4 antibody; and
- b) maintaining a culture of the cell by passaging the cell using a protease treatment, wherein the cells of the culture do not express SSEA1, express SSEA3, SSEA4, Oct4, Tra-1-60, Tra-1-80, and express nestin substantially uniformly.
- 11. (Withdrawn) The method of Claim 10, wherein the protease treatment comprises the sequential use of Collagenase and trypsin.
- 12. (Withdrawn) The method of Claim 10, wherein the cell is maintained by using a protease treatment for at least 13 passages.
- 13. (Withdrawn) The method of Claim 10, wherein a majority of the cells of the culture have an abnormal karyotype.
- 14. (Withdrawn) The cell culture of Claim 13, wherein the abnormal karyotype comprises a trisomy of at least one autosomal chromosome.
- 15. (Withdrawn) The cell culture of Claim 14, wherein the autosomal chromosome is selected from the group consisting of chromosomes 1, 7, 8, 12, 14, and 17.
- 16. (Withdrawn) The cell culture of Claim 13, wherein the abnormal karyotype comprises a trisomy of more than one autosomal chromosome.
- 17. (Withdrawn) The cell culture of Claim 16, wherein the autosomal chromosome is selected from the group consisting of chromosomes 1, 7, 8, 12, 14, and 17.
- 18. (Withdrawn) The method of Claim 11, wherein Collagenase is used at a concentration of approximately 1 mg/ml for approximately 5 minutes, and wherein trypsin is used at a concentration of approximately 0.05% for approximately 30 seconds.

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- 31. (Currently amended) A human pluripotent aneuploid embryonic stem cell produced by:
 - a) selecting a pluripotent embryonic stem cell using an anti-SSEA4 antibody; and
 - b) maintaining a culture of the cell by passaging the cell using a protease treatment, wherein cells of the culture do not express SSEA1, express SSEA3, SSEA4, Oct4, Tra-1-60, Tra-1-80, and express nestin substantially uniformly the method of Claim 10.
- 32.-74. (Canceled)